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**IMPACT ASSESSMENT OF IDRC PUBLIC GOOD AND POLICY PROGRAM  
CASE STUDY CONSULTANCY**

**SOCIAL AND BIOLOGICAL IMPACT  
FOLLOWING THE INTRODUCTION  
OF HOUSEHOLD PIPED WATER  
IN RURAL GUATEMALA**

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## Highlights

*The present document describes and presents the results of the impact assessment of the research project Social and Biological Impact Following the Introduction of Household Piped Water in Rural Guatemala, which was carried out by the Institute of Nutrition in Central America and Panama (INCAP), during the period of February 1993 and August 1995. The exercise was part of a global impact study performed by the International Development Research Centre (IDRC) evaluation unit with the following objectives:*

- 1) to document and analyze the output, reach and impact of Centre projects, which have aimed at public goods/ quality of life and policy development results.*
- 2) to identify factors in the context, design and implementation of these projects, which have influenced the types of impacts performed and facilitated or impede their range and quality.*
- 3) to synthesize across the cases generalizable characteristics of the impacts of IDRC-supported research activities and factors which influenced them.*
- 4) to generate, from this synthesis, recommendations for improving the development and management of research projects toward realizing more and better impacts more effectively.*
- 5) to develop a user-friendly framework for assessing and fostering the impact of development research.*
- 6) to identify and document those cases which might provide material for IDRC's public information strategies.*

*The research took place from September 16 to September 22 and included the following activities:*

- 1) Revision of the project's documents and correspondence.*
- 2) Interviews with different kinds of actors: synthesis of the information gathered.*
- 3) Synthesis*
- 4) Organization of the report*
- 5) Recommendations*

*The project taught significant lessons about occurrences during and after a successful development research project, in the Latin American context, in terms of results diffusion, utilization, and impact. The study left as many interrogants as it provided answers to numerous question about how to assess the impact of a development research project depending on the points of view of different actors, where the limits of different concepts were set, where the answers were obtained and the time between the project and the assessment exercise.*

*Many questions were raised about the responsibility of the funding agencies and research institutions in looking for the conditions that will facilitate the effective links between the academy, community, government decision makers and other development agencies. A set of recommendations were made to IDRC on specific actions to be taken at the time of project funding and evaluation in order to enhance the impact on the social processes.*

### **1.0 Background**

*Since its foundation, IDRC has been supporting research and/or development throughout the developing world with more than 5000 total projects supported. The center has accumulated a great amount of experience through participating in project development activities, monitoring and evaluating specific projects and conceptualizing discussions about the role of knowledge in socio-economic development. However, no attempt has been made to go beyond the project level to assess the global impact of research on socio-economic development.*

*One exercise of this kind will be useful in several ways. First, it will shed new light on the complex relationship between knowledge, research and development. Second, it will give information about the influence that IDRC programs have had in its efforts in Third World countries to achieve a better life compatible with human dignity. Finally, it will provide a means to inform the Canadian government and society about the impact of development activities in Third World growth.*

*To achieve the objectives of the Impact Assessment of IDRC Public Goods and Policy Projects, a series of case studies are being carried out in all the regions of the world. These activities are focusing on two types of outcomes: a better standard of living and policy development.*

*The project review that follows fits quite well with the purpose of the survey since the research objectives dealt with the impact of social intervention, introduction of piped water into rural houses and its effects on health, nutrition and the well-being of women and children as well as its effects on the energy balance of rural women. Moreover, the research hypotheses were related to the quality of life in rural populations, and the results are expected to influence public and social policies and programs.*

## 2.0 Methodology

*The case study was based on the following:*

### 2.1. review of project documents (See annex 5 )

*2.2. Interviews with different people at INCAP, development agencies, independent researchers and the Guatemalan government. (See Annex 2). There was not a definite list at the beginning of the process. A small number of potential informers were identified with the help of the coinvestigator. Other names were suggested by the informants until certain degree of saturation was achieved.*

*Only the INCAP staff and the co-principal investigator had first-hand information about the project at the time of my evaluation. One or two staff members from the other agencies read the final report, and only one person attended the project's final workshop. This was due to the constant personnel changes in the international agencies. This made it difficult to assess the correlation between what is going on in the development programs and the research process, and how it is effecting outputs. The information gathered was organized and analyzed according with the study terms of reference and the report was produced.*

## 3.0 Project's title and number

*Social and Biological Impact Following the Introduction of Household Piped Water in Rural Guatemala #92-1050*

### 3.1 Description of Project

*The study was based on partial, not conclusive evidence, obtained through research carried out during the International Drinking Water and Sanitation Decade. The report elaborates about the association between improved access to safe drinking water, and its benefits to health, nutrition, energy and the family's well-being.*

*The general purpose of the study was to evaluate the social and biological impacts of a piped water supply by comparing the time and energy saved in collecting piped versus unpiped water and its redistribution, as well as the health and nutrition benefits, in order to promote health and nutritional interventions.*

*The specific objective were the following:*

- 1) To encourage participation from the local community to access the community water system and the general patterns of labor/time allocation of women in the community.*
- 2) To document, from a user (emic) perspective: a) beliefs of attitudes towards water and its use, b) water-related activities, c) the extent of participation in the local water committee and other components of the water project, d) type and amount of water used regularly and for what purposes and e) perceived effort and duration of specific activities.*
- 3) To quantify the total amount of energy expended, level of activity and activity pattern associated with water- and non-water activities.*
- 4) To document time saving related to piped water supplies by measuring the time spent on water and non-water related activities performed by women during the day and how the time saved is allocated to specific activities.*
- 5) To access the health and nutrition differences between mothers and children with and without piped water supplies.*
- 6) To estimate dietary intake among preschool children and adult women from the communities with and without piped water.*

*In general terms, the study process and results were in accordance with the general purpose. It gave conclusive answers to most of the questions posed about the association between availability of piped water in house, time and energy expenditure and the utilization of the saved time for productive activities. Other important findings were:*

- 1. Health was not mentioned by the population as a motivation to have piped water in the household. This finding is very important when introducing the concept in the community development programs.*
- 2. Direct association was not found between water availability in the household and nutrition or health. This result could be misleading. It is well-known through sound research (example: INTA in Chile) that water availability is one of the factors in improving the health of the family and the control of children's diarrheal syndrome. Furthermore, safe water availability, plus health education in the use of water-food handling, sewage disposal and personal habits-will produce notable changes after a period of time. Therefore, the study's design was not strong enough to show association between variables.*

3. *Social and economic effects were identified as positive effects of piped water in the household. This could mean that water programs are a legitimate entry point to socio-economic development. Correct utilization of the time saved (approximately two hours daily) must be included in the education for development programs at the community level.*
4. *Women, especially those with children, are involved in physically demanding activities. The energy expenditure time was significantly higher for the non-piped communities. The level of energy saving (approximately 20 percent) is very important from the biological point of view. This finding suggests the possibility of redistribution of food as a source of energy within the different family members.*
5. *Women in non-piped water communities devoted significantly more time to domestic activities, including fetching water. Whereas women in communities with piped water devoted more time to productive activities.*
6. *No striking differences were observed in the morbidity pattern of children from either of the communities.*
7. *Apart from a few exceptions, closer access to water did not make a significant difference in food consumption.*

### **Strategy**

*The composition of the study group made it possible to design an innovative strategy in terms of transdisciplinarity and a mix of methodological approaches. Dr. Steve Esrey, nutritional epidemiologist, has vast experience in research about diarrheal disease, lactation and environmental sanitation. Also, he is an expert on sophisticated analysis methods. Ms. Elena Hurtado, anthropologist, has field experience in rural water supply programs and in the organization of municipal water committees. Dr. Erik Diaz has vast experience in clinical and public health nutrition.*

*The basic study design was aimed at comparing differences in community perspectives, time allocation, energy expenditure, and health and nutrition parameters among three communities with piped water in the houses and three communities without piped water.*

*The communities studied are located in the municipalities of Totonicapan and San Bartolo Aguas Calientes in the northwestern highland region of Guatemala. A very interesting mix of qualitative and quantitative methods were utilized to achieve the study's objectives: Case-control to study the association of having or not having piped water and a series of health, nutrition and social variables; semi-structured interviews and focus groups, key informants, morbidity surveys, and structured observation.*

*Assessment of energy expenditure through the double-labelled water (DWL) heart rate monitoring techniques were also included.*

*In summary, this mixture of research methods proved to be appropriate to achieve the objectives. The study's execution was smooth, with only two modifications without negative effects for the design: during the second period of the study, one of the non-piped water communities was replaced by another community due to the fact that the original community had piped water installed in the middle of the study. Some women had to be substituted during the study for different reasons. From the methodological and logistical point of view, the study can be classified as "moderately successful" Out of six specific objectives, five were achieved. Only one, related with the association between water availability in the household and nutrition or health could not be achieved due to design problems.*

### **Inputs/ Activities**

*The total budget of CAD\$190,735 was covered by IDRC. The recipient's institution, INCAP, covered the cost of training local personnel, purchasing office supplies, and providing administrative and technical infrastructure. Mc Gill University and McDonald College provided technical assistance through the participation of Dr. Esrey, and the University of Cambridge in England performed the doubled-labelled water analysis to determine energy expenditure.*

*A supplement of CAD\$5,885 was approved by IDRC for the following reasons: there was a delay between IDRC approval of the project and the signing of the MGC by Mc Gill University. During this time, the cost of some materials increased.*

*In order to assure the quality of the study, a careful process of conceptualization and planning the design was carried out by INCAP with the cooperation of Dr. Esrey, Dr. Hurtado and Dr. Diaz. An interest group was created with the participation of PAYSA, UNICEF AND CARE as possible users of the study's findings. They did not participate in the project's execution but reconvened for the final workshop that was attended by 27 representatives of government and international development agencies (Guatemalan Ministry of Health, UNICEF, CARE and USAID).*

*The methodology of the workshop can be considered as innovative. The main findings were summarized. Then, three work groups were formed to discuss the implications of the findings. In the first and second groups, intersectorial and interagency views were discussed. In the third group, a paradigm for intersectorial work was presented and analyzed. Since the most important development agencies were present, the workshop assured a guarantee of continuity after the study. Another methodological innovation was*

*the way in which the women's daily activities were observed. There was spot checking every ten minutes. The seven field workers that were trained are still working for INCAP.*

*In summary, the inputs look adequate, timely and relevant to the study's objectives, and the prospect of using the results in rural water and development programs are very good. ICT's have not been used until the present time. As we will see later, the time is coming to start a communication agenda as part of the new organization of the water programs in Guatemala.*

## **Context**

*The general context in which the study took place was favorable to the successful execution, and the post-project activities targeted the finding's dissemination and utilization of the results. At INCAP the study was related to two lines of research: health, environment and nutrition and water and health. As a result, this favorable situation as well as characteristics of the project's inputs and the methodology of the workshop were a guarantee of continuity after the study was finished.*

*At the country level, the development agencies had millions of U.S. dollars from AID for water programs in 400 communities of the study area. From the political point of view, Totonicapan, the municipality where four out of the six communities are located, was never affected by the violence that Guatemala has been suffering for years. No adverse factors were identified during the interviews with the different people and institutions.*

## **3.2 Project Outcomes**

*The main purpose of the study was to produce new knowledge about the association between the availability of piped water and health, nutrition and physical activity related variables. At the same time, it was evaluating a social intervention. Therefore, new knowledge and value judgement about the benefits received by the rural population from a specific intervention can be considered as the planned research outcomes.*

*In these terms, we can identify the two significant outcomes of the research projects: new knowledge and value judgements.*

*In terms of institutional and individual capacity outcomes, the only one that was identified was the ability of the eight field workers of INCAP that were trained in innovative techniques for structured observation.*

*The following are the main output products and services, which could be identified as results of the study:*



**1) Publications: only two reports could be identified:**

*1.1 The study's final technical report, written in January 1995, is a very well-written document. It was circulated among the development agencies and the participants in the final workshop. No large scale dissemination of the total document or excerpts has been done. There is not a Spanish version.*

*2.2 Diaz Erik and Esrey Steve: Water Supply and Energy Balance in Rural Guatemalan Women This article has just been received from Dr. Diaz, who is now working at the University of Chile in the medical school's department of nutrition. The authors do not mention the journal to which they are going to send the report for publication. However, it very clearly presents the findings related to water supply and energy balance. It also discusses the policy and programmatic implications.*

**Final Workshop**

*It was the most important product looking for an adequate discussion, dissemination and eventual utilization of research results in the water, health and rural development programs with a strong components of women health and personal development.*

**Training**

*As previously mentioned, eight field workers were trained in innovative techniques of structured observation. A majority of the workers are still working for INCAP.*

**Modified Technologies**

*In addition to the improvements of the structured observation techniques, the use of the heart rate monitoring, to estimate energy expenditure under field conditions, was compared to the double-labelled water technique and found highly reliable for group estimates.*

*Out of the four identified outputs, two can influence the final impact of the study: the two publications and the final workshop. The remaining two outputs, training and modified technology, could have a moderate effect in the research capacity of INCAP.*

### Reach (beneficiaries)

*As was noted earlier, since the planning stage, the research group tried to identify the most probable users and beneficiaries of the project's results with the formation of an interest group and participation of the most significant development agencies in Guatemala: UNICEF, USAID, CARE, and the Ministry of Health (PAYSA). The expectations were that the study's findings should help in deciding upon educational strategies and specific program contents for a new health education program that was being discussed between the MOH and UNICEF.*

*There was no participation of the agencies during the execution of the study. They met at the end to participate in the project's workshop. There is no evidence of continued systematic activities aiming at the utilization of research results immediately following the end of the study. After the interview with the development agencies, one can come to the conclusion that more than the institutional memory, is the individual appropriation of knowledge which has influenced in the application the results.*

*The organizational structures of the rural water program in Guatemala are quite complex and have been subject to continuous modifications including changes in the responsibilities of different national institutions and international agencies. Although there are no official statements from the institutions availing the results and products of the project, there has always been a member of the study team and/or a person who participated in the interest group, and the final workshop, ready to use the experience for the successful reorganization of the program's networks. Some examples of these include:*

- 1) At the time when the study was being carried out, Dr. Esrey (P.I.) advised USAID to change the mission of the traditional rural water programs. At his suggestion, health was introduced as an important element, and included in the evaluation, as well as the traditional measurement of the number of water systems installed.*
- 2) In the case of UNICEF, the study's results have influenced the promotion of women's participation in the programs as responsible for the utilization of water for domestic purposes (ie. food handling and preparation) and for maintaining the family's health.*
- 3) When CARE came into the picture in 1994, Dr. Esrey was also present providing technical assistance in the reformation of the program, with the intensification in health components and gender orientation. At this time, the women's training as promoters of health was initiated.*

- 4) *In 1996 the Instituto de Fomento Municipal was given the responsibility of coordinating the different programs. During the last year, an ambitious plan, the Social Alliance, has been formulated with the participation of the Fund for Social Investment (FIS) and the technical assistance of UNICEF. The general purpose of the Alliance is to motivate the population to the importance of resource water and connect them to different social agencies that financially support local water systems. According to Dr. Gonzalo Arteaga, UNICEF program officer, the findings of the study have been very useful in the formulation of the plan.*
- 5) *In 1998 CARE will be subject to reorganization and will initiate a new project regarding Security of the Household Way of Life. This project will be established to improve the quality of life in rural families through health, education, housing, home economics, community participation, nutrition and water and sanitation. The final document of the project is now in the hands of the program's staff, who are looking for ideas about program principles and educational contents. It is worthy to say that one of the most important findings, the impact of piped water in the energy balance of women and availability of time for productive activities, has not been used until now. The PAYSA program tried to use it in two communities but they failed. I think that this is the occasion to include it in the educational components related to nutrition and home economics.*

### **In summary**

*The national institutions and international agencies that work in the field of rural water programs have been the principal users of the study's findings. The personal contact of the research team, with the development agencies, is vital for the social appropriation of knowledge and use of the results. It is significant to note that the research group successfully identified the right users from the beginning of the project. Also, it is interesting that although the study did not prove the association of water availability and health, the emphasis was put into the programs to include health elements.*

### **Impact**

*We can not look at the impact as the end of a linear unicausal, successive process: research results, dissemination, utilization, specific, measurable impact. Real life is not like that. The project's products are there in society. Many factors make it possible for the results to meet the right users at the right time. Very seldom in science, and less in social sciences, the process is simple. We have many examples in the physical and biological sciences showing wide gaps between research, social appropriation and successful utilization.*

*On the contrary, this does not mean that nothing can and should be done in order to direct and accelerate the process. The point is that the expectations have to be realistic. This project is a good example of the following: at the onstart of collecting information, I was very pessimistic about the results of my investigation. I said to myself- How can it be that such an important and successful piece of research has no social implications in a small country like Guatemala? When the investigation continued, small pieces of evidence came together and made sense. Now, I am sure that the study had a real impact in the philosophy and operation of rural water programs in Guatemala. The study process, and not necessarily the results, induced a reflection about the importance of the health related components and the outcome of the program.*

*In chapter three, Strategy, I said that the project can be classified as “moderately succesful”. This is true as the accomplishment of the objectives and technical aspects is concerned. In relation with the impact of the project on the national and international development agencies and the country community, my personal perception is that the project had a real impact in the philosophy and operation of the rural water programs in Guatemala. The incorporation of health and gender components in the rural water programs supported by the government and development agencies (UNICEF, USAID, CARE, PAYSA.) can be linked to the study process and findings and considered as the most important impact of the project. It is to note that the most important finding of the study, the relationship between piped water availability and time and energy saving, has not had any impact until the present time.*

*It is not possible to identify, step by step, the track between the study process and findings and the impact. As was said before, very seldom this linkage can be identified as an immediate, lineal, unicausal process. The fact that the health water connection was not confirmed by the research looks like a paradox when I say that the incorporation of health components in the programs is one of the research impacts. The research process, not the findings, was one of the factors which had influence in the policy decisions by the government and development agencies. There was unanimity among the informants, about this.*

*The international development agencies played an important role in the utilization of the study findings. This was not unexpected. As a matter of fact, policy makers and program planners working in the field of environmental sanitation and hygiene education, including international agencies working in Guatemala and abroad were identified by the research institution as results users. The proposal was discussed with the Ministry of Health and various donor agencies which support water and sanitation projects (UNICEF and USAID). According with the parties, the findings from the study should help in deciding upon educational strategies and specific program content*

*In reviewing the possible study impact, we have to take into consideration several perspectives. The study itself was “research on impact”. It aimed to assess the impact of*

*an intervention(availability of piped water at the household level) on women,s time and energy and on family health. The hypothesis about impact on time and energy was proved, not the one about health variables. It was expected that the results would be used by development agencies. A paradoxical impact was obtained at the institutional level. To assess the impact of the new program policies on the communities would need a new research project to evaluate the effectiveness of the new interventions.*

*Impact does not have a deadline. Only two years have gone since the study was done. Thereis still time to enhance the impact trough systematic activities directed toward a better utiization of research results. Of special importance is the interaction with development agencies outside of the health sector in order to incorporate the use of time by women in productive activities in the educational components of the programs.*

*The rural water programs and the reponsabilities of different development agencies are now in the process of revision. This is a good time to incorporate new ideas into the programs and to promote research as a worthy component of social progress.*

*To achieve this, it is very important that the research institutions, with IDRC support, organize a series of activities during this crucial period. These activities may include the orientation of development programs and promotion of research as an worthy component in social progress.*

*The contributing factors in the impact were the following:*

- 1) The relevance of the study to a priority problem in Guatemala*
- 2) The high technical capacity of the study group*
- 3) The credibility of the research institution*
- 4) The timely and well-planned activities that identified the correct potential users*
- 5) The availability of the reseachers at all times to help the program managers*

### **3.3 Public Relations**

*This project is a good example of success stories which should be included in a public relation program. Not everything is perfect and there are weak aspects to be recognized and learned from. Two of these weakness are the absence of scientific publications and the lack of organized circulation of the results. These can be the reasons for not*

*implementing the time and energy savings on the women and the possibility of reorienting the savings in terms of redistribution of food (energy) and the utilization of time. Furthermore, there was not contact with agencies interested in rural development beyond water programs.*

*There has been some expanding activities whose impact can not be assessed at the present:*

- 1) Exerpts from the final report were included in the AID report of the project about capacity of payment by the communities for public services.*
- 2) INCAP has used the information about energy and time savings for advocacy purposes in several meetings with the government's social policy makers.*
- 3) Last year the regional meeting for water strategies took place in Guatemala. Dr. Esrey presented the study's results. Moreover, he has writtten one of the position papers based on this project and similiar studies in other countries that will be presented in Guatemala this November.*

#### **3.4 Enhancement of Outcomes**

*In previous chapters, some measures have been mentioned in order to enhance the outcomes of future projects. The following is a summary of the measures:*

- 1) A sound scientific study design is essential to assure the quality of the accomplishments produced by the project. It is the responsibility of the IDRC's staff to be strict in the assessment of the scientific strenghts of the study's design.*
- 2) The relevance of the study's subject to priority areas for the country will increase the probabilities that pertinent value judgements are made and the study results are used to obtain positive changes.*
- 3) The pre- and post study strategies must be discussed and approved since the beginning of the proposal's review in order to carry out systematic activities directed toward the proper identification of users and beneficiaries of the projects results. In addition, the timely publication of the final report, and the preparation of a plan regarding scientific papers to be published in journals, must also be discussed at this time.*

- 4) *Technical and economic support should be given for follow-up activities, such as workshops and presentation of results to policy makers and program directors. Executive summaries could be a useful instrument to communicate with this audience. The duration of the follow-up will, of course, depend on the characteristics of the project.*

*As can be seen, there is nothing new in these suggestions. All of them have been discussed at length during the last five or six years. Emphasis should be given to the project's scrutiny for scientific quality and relevance. Economic support for follow-up activities should be included in the budget. Finally, the expectations have to be realistic according to the project's characteristics and the political environment.*

#### **4. Summary**

##### **Methodology**

*The decision to carry out the Impact Assessment of IDRC Public Goods and Policy Projects was a very good one. The methodology for the case study is appropriate. In my case, I did not have any difficulty in obtaining the information from the different sources. One suggestion for the future might be to correspond with the study team, and the potential informants, early enough in the process. Hence, during the field work, the consultant will have better basis for an oriented discussion. The terms of reference should be revised to avoid repetitions and confusions.*

##### **Project Components**

*Comments about the project's different components are included in chapter three of the report. However, I would like to summarize my impressions.*

##### **Objectives**

*Clearly stated, most of the objectives were met by the study.*

##### **Strategies**

*The composition of the study group, the mix of methodological approaches and the scientific quality of the study's design made it possible to achieve the project's objectives and to get the correct information regarding the study's subjects.*

## Inputs

*There were inputs from different sources: IDRC, INCAP, Mc Gill University, and the University of Cambridge. They were adequate, timely and relevant to the study's objectives. ICT was not used during the project's execution. I am suggesting its utilization at this time when the water systems programs in Guatemala are in the revision process.*

## Outputs and Reach

*Since the beginning of the project, the users and beneficiaries were identified and involved in the study's planning. Once the study started, there were very few activities aimed at achieving adequate diffusion and proper utilization of results. Only a workshop was carried out to discuss the project, and the final report was given to the workshop's participants. There has been no publication until now, and no Spanish translation of the final report has been written.*

## Impact

*The project had a real impact, which is reflected in the philosophy of Guatemala's water system programs, and the development agencies. Health activities are now a natural component of the programs. It is significant to note that the most important findings -the impact of piped water availability on the energy balance of rural women and the time it saves for use in productive activities- has not been adequately distributed and/or utilized. No contacts have been made with development agencies outside health.*

*Chapter 3.2 of this document elaborates on the non-linear process of communicating the research results, social appropriation of knowledge and result utilization in development programs. In this case, it is difficult to associate the project's impact and the planned dissemination of results, except the final workshop, which seemed to be the most worthy factor in the social appropriation of the project's results. Suggestions have been made to support a series of planned activities of public information and presentation of findings as well as the discussion of the role of knowledge and research in socio-economic development.*



## **Annexes**

1. *Travel itinerary*
2. *List of interviewees*
3. *Consultant fee and per diem claim*
4. *Field work notes*
5. *List of documents*

### **Annex No. 1**

#### *Travel itinerary*

*September 15            Travel Mexico City to Guatemala*

*September 15-22      Work in Guatemala*

*September 22           Travel Guatemala to Bogota*

*September 23           Travel Bogota to Manizales*

*Enclosed is the receipt from the travel agency for the round trip from Manizales-Guatemala-Manizales. The air fare to Mexico City and from there to Guatemala was paid for by me.*

## **Annex No. 2**

### *List of interviewees:*

*Dr. Hernan Delgado, Director at the Institute of Nutrition of Central America and Panama. (INCAP)*

*Dr. Rafael Flores, Director of Research at INCAP.*

*Dr. Arnulfo Noguera, Director of Technical Assistance at INCAP*

*Ms. Elena Hurtado, Co-principal investigator*

*Dr. Salvador Baldizon, Director of Water and Sanitation Programs CARE in Guatemala*

*Mr. Carlos Calderon, Engineer at CARE-PAYSA  
(Water and Sanitation Program for the highlands)*

*Ms. Eugenia Saenz de Tejada, AID BASICS  
(Primary Health Care Program)*

*Dr. Gonzalo Arteaga, Program Officer at UNICEF*

*Mr. Marco Tulio Lopez, Director of Health Education in the Ministry of Health in Guatemala*

*Dr. Orlando Marroquin, Director of Health Education at PAYSA*

*Dr. Baudilio Lopez health programs at USAID*

## **ANSWERS TO SPECIFIC QUESTIONS**

### **Reach**

*I can not comment about "people" reached by the project. The institutions are those identified as users of the results from the beginning. Probably, development agencies outside of the health sector should have had a better representation in the two events: interest group and final workshop. At the community level, the contact between the research team and the people was quite close. There were several meetings with the local Water Committees at the beginning and at the end of the field work as well as with the local authorities and health promoters. At the end of the collection period, a general meeting was held in each community with all the participating families and water committee members in order to obtain feedback as well as to acknowledge their collaboration. Although I did not have the opportunity to interview community members, it is easy to assume that the participatory approach and the formal meetings created awareness about the study issues. No teachers and NGOs were directly involved in the research process.*

*Not details were given by INCAP staff about the two meetings related to regional water strategies and the several meetings in which the institution made use of the research findings for advocacy purposes.*

*It has been mentioned in previous chapters that international organizations policies have changed after the project. As a matter of fact, the policies have been adopted by the government. The role of international organizations is one of technical assistance. The PAYSA program (Programa de Agua y Saneamiento del Altiplano) is USAID funded and Ministry of Health executed water and sanitation program working at the time of the study in the Department of Totonicapán. The program health promoters tried to incorporate the time and energy saving and the use of the saved time in productive activities but USAID rejected the idea for "budgetary reasons".*

*The INCAP field workers are still using the spot checking participatory observation methodology. As far as I know, not efforts have been made, in order to incorporate new ideas in other institutions.*

*The "interest group" was important because the potential users actively participated in the preparation of the study. As was said before, it did not have active participation during the execution of the study. In the case of the workshop, I consider that the dynamics was innovative and gave basis for continuity. However, as said before, there were not systematic activities after the workshop came to an end.*

*I do not think that I can elaborate much about the "individual appropriation of knowledge" It was a fact. It would be an interesting study to inquire about the different paths new knowledge follows through society to meet potential users. It is interesting to*

*know that other case studies have got the same findings. There is no doubt that Dr. Esrey was the person who had more influence in the utilization of results. He was in contact with the Guatemalan institutions because, the projects existed.*

### ***Context***

*There is no doubt that the social and political context was favorable to the project. The fact that there was money available created interest in the field of rural water systems and their educational components. Now, in relation with the socio political environment in the Department of Totonicapán as compared with other rural areas of Guatemala: it is very difficult, some times impossible, to do field work when there is violence in the area. The fact that there was a state of relative peace, made it possible to carry out the field work.*

*At INCAP level, the fact that the institution had at the time a line of research related to water and health was a positive factor to carry out another project of the same line.*